

 HILLFOOT METALS SUPPLY CHAIN INNOVATION	MATERIAL DATASHEET	
	S99	Page 1 of 1

Material Grade: **S99**

Available Variant(s):

Variant	Intended use	Condition of supply
S99A	Forging stock, wrought or cast	Softened
S99B	Black bar for machining	Softened
S99C	Forgings	Softened
S99D	Bright bars for machining	Softened
S99E	Black bar for machining	Hardened and tempered
S99F	Forgings	Hardened and tempered
S99G	Bright bars for machining	Hardened and tempered

Nearest engineering grade: **BS970, 826M40**

Associated standards:¹ **BS 5S 99: 1994 + A1:2015**
BS 6S 100: 2010

Melting/refining method(s): **Manufactured by an air electric process**

Typical tolerance(s):

Variant	Dimensional tolerance	Straightness	Clean-up
A	Per agreement	Per agreement	Per agreement
B, E	EN10060	EN10060	No less than 4%
C, F	Per agreement	Per agreement	Per agreement
D, G	Per agreement	Per agreement	Per agreement

1. TYPICAL CHEMICAL COMPOSITION

%	<u>C</u>	<u>Si</u>	<u>Mn</u>	<u>P</u>	<u>S</u>	<u>Cr</u>	<u>Mo</u>	<u>Ni</u>	<u>Al</u>	<u>Cu</u>
Min	0.36	0.1	0.45	0	0	0.5	0.45	2.3	0.015	-
Max	0.44	0.35	0.7	0.025	0.015	0.8	0.65	2.8	0.05	0.3

2. TYPICAL MECHANICAL PROPERTIES

Test type				Tensile and hardness test (at room temperature)						Impact test (izod)
				Yield (Re)	0.2 % proof	UTS (Rm)	Elong (A)	R of A (Z)	Hardness	Room Temp
Condition	Nominal diameter or thickness	Direction	Unit	N/mm2	N/mm2	N/mm2	%	%	HB	ft/lbs
Softened	-	-	Min	-	-	-	-	-	-	-
			Max	-	-	-	-	-	277	-
Quenched and tempered (IRS 150 mm)	-	L	Min	-	1080	1230	10	-	363	25
			Max	-	-	1420	-	-	415	-

¹ valid at the time of writing.

Whilst great care and attention has been paid to compose this datasheet but we will not take the responsibility for any errors.